

REMARKS

Applicant thanks the Examiner for acknowledging the claim for priority under 35 U.S.C. § 119, and receipt of a certified copy of the priority document submitted December 5, 2001.

Status of the Application

Claims 1-9 were all the claims pending in the Application. Claims 1-9 have been rejected. Claim 10 is added to more fully describe the invention.

Obviousness Rejections of Claims 1-4 Under 35 U.S.C. § 103(a)

The Examiner has rejected claims 1-4 under 35 U.S.C. § 103(a) as being unpatentable over Oshita (US 6,028,383; hereinafter "Oshita") in view of Anderson et al. (US 3,735,168; hereinafter "Anderson"). This rejection is respectfully traversed.

Claim 1

Oshita discloses a stator structure of a resolver (see FIG. 2) with multilayered iron core 1, tooth portions 2, slots 3, insulation member (cap) 4, and stator windings 5. Extended insulating portion 10 is also provided along with a plurality of pins 11. Lead wire 7 with connector 6 is connected to the extended portions 11a of the respective pins 11, which are also connected to stator windings 5.

However, as the Examiner agrees (see O.A., numbered paragraph 2), Oshita is completely silent on the provision of any resin so as impregnate the stator coil and fix it to the magnetic poles, as recited in claim 1, and therefore cannot teach or suggest such a feature.

Thus, the Examiner looks to Anderson to provide the claimed elements, taking the position that "Anderson teaches in FIG. 1 an electro-dynamic machine comprising insulating

stator coils impregnated with liquid resin for the purpose of insulating the coils. Therefore it would have been obvious to one having ordinary skill ... to modify the resolver stator of Ohshita with teaching [sic] Anderson insulating coils for the purpose of improving insulation.”

Anderson is directed towards improved insulation for a high voltage conductive coil and discloses the specific use of a *combination* of insulative tape 26, insulative wrapper 20, and a binder resin so as to provide the insulation layer. The binder resin is applied as a liquid by vacuum-impregnation.

However, Applicants respectfully submit that, although the binder resin disclosed by Anderson may be applied as a liquid (as all thermosets are), this is only an *intermediate* step. In contrast, the *completed* form of the insulated coil does not disclose a resin that is “softer than an epoxy,” as recited in claim 1. Specifically, Anderson discloses that the “straight sections of the coil ... [were] cured by heating in a hot press for 2 hours at 400°F, and the entire coil was then baked in an oven for 14 hours at 325°F” (col. 6, lines 46-50). Then, “upon curing, the impregnating liquid resin permanently sets into a hard, solid layer” (col. 7, lines 14-16; emphasis added). Thus, this “hard, solid layer” clearly cannot teach or suggest a resin that is “softer than epoxy,” as recited in claim 1. In fact, replacing such a “hard, solid layer” is precisely the object of the instant Application, for all the reasons discussed on pages 1 and 2 of the Application, and therefore the resin disclosed in Anderson is no more relevant to claim 1 than the disclosed related art.

Thus, Applicants respectfully request that the Examiner withdraw the instant rejection.

Dependent Claims 2-8

Applicants respectfully submit that claims 2-8 are believed to be allowable, at least by virtue of their dependency. Further, Applicants respectfully submit that at least the following claims are believed to be separately patentable over the applied references.

Claims 3 and 4 recite a plurality of terminals with “wire ends of the stator coil wound around” one of them to form a “wire connecting part” that has a portion where “the wire end and the terminal are fixed to each other” and a “free wire end.” However, Applicants respectfully submit that the Examiner has not rejected these portions (or any other portions of claims 3 and 4 for that matter) with any specificity, and thus has not established *prima facie* obviousness of these claims.

Further, Applicants respectfully submit that there is no teaching or suggestion in either Ohshita or Anderson of such features, as Anderson is silent regarding any terminals or wire ends, and Ohshita is silent regarding any structural features of the connection between terminals 11 and any wire ends of the stator coils.

Thus, Applicants respectfully request the Examiner to withdraw the above rejections.

Obviousness Rejections of Claims 5-9 Under 35 U.S.C. § 103(a)

The Examiner has rejected claims 5-9 under 35 U.S.C. § 103(a) as being unpatentable over Oshita in view of Anderson in further view Fukaya (US 5,057,732; hereinafter “Fukaya”). This rejection is respectfully traversed.

As discussed above, claims 5-9 are believed to be allowable, at least by virtue of their dependency. Further, at least the following claims are believed to be separately patentable over the applied references.

Based on the Examiner's positions relative to this rejection, Applicants believe that she may have intended to reject claims 3-9, rather than 5-9, in view of Fukaya. Thus, Applicants have traversed the instant rejection as if it had been applied to claims 3 and 4 in addition to claims 5-9.

Oshita and Anderson are fully discussed above. Fukaya discloses (see FIG. 2) a coil bobbin 2 with coil wires 4a-4d "conductively fixed" (col. 3, lines 41-48) to connector plates 3a-3c, but is otherwise silent on the features of that connection.

In contrast, claims 3 and 4 recite a specific connection structure wherein a plurality of terminals with "wire ends of the stator coil wound around" one of them form a "wire connecting part" that has a portion where "the wire end and the terminal are fixed to each other" and a "free wire end." There is simply no teaching or suggestion of such a specific configuration in Fukaya, which is silent as to any description of the connection between wires 4a-4d and plates 3a-3c, other than being "conductively fixed." Specifically, while Fukaya does seem to show some wrapping of a wire around connector plates 3a-3c, there is no teaching or suggestion that, in those areas, there is both a portion where "the wire end and the terminal are fixed to each other" and a "free wire end," as recited in claims 3 and 4.

Claim 9 further defines the "free wire end" as having "a resilient function and slack." However, as discussed above, Fukaya is simply silent on any specific description of the connection between coil wires 4a-4d and the connector plates 3a-3c. Further, the illustration in FIGS. 2 and 3 of what seems to be a wire wrapped around the contacts 3a-3c shows the wire wrapped tightly around the contacts throughout their length. Thus, Applicants respectfully

submit that such a tightly wrapped wire simply cannot provide the “resilient function” or “slack” recited in claim 9.

Conclusion

In view of the foregoing, it is respectfully submitted that claims 1-10 are allowable. Thus, it is respectfully submitted that the application now is in condition for allowance with all of the claims 1-10.

If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Please charge any fees which may be required to maintain the pendency of this application, except for the Issue Fee, to our Deposit Account No. 19-4880.

Respectfully submitted,



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